



# PCG400, PCG410

## Pirani Capacitance Diaphragm Gauge

The INFICON PCG Pirani Capacitance Diaphragm Gauge is the first vacuum gauge to combine the advantages of a ceramic capacitance diaphragm gauge and the cost effectiveness of a Pirani in one compact package. In the measurement range between 100 mbar (75 Torr) and atmosphere, where Pirani sensors lose sensitivity, the capacitance diaphragm technology supplies accurate, gas-type and flow independent measurement values up to 1500 mbar (1125 Torr). Available with up to two integrated relays, the PCG can eliminate the need for 1/2 atm or other expensive switches. To simplify tool integration, the Pirani and CDG signals are combined into a single log/linear analog output spanning the full range of the gauge.



### ADVANTAGES

- Gas-type-independent above 100 mbar (75 Torr) - enables safe venting with any gas mixture
- Higher accuracy and reproducibility at atmosphere - for reliable detection of atmospheric pressure, no frequent readjustment at atmospheric pressure anymore
- Independence of mounting position - provides engineering freedom in tool design
- Faster atmosphere detection - eliminates waiting time and thus shortens process cycle time
- Compact design - saves valuable space on the tool
- One log/linear output signal over the entire range - for easy tool integration


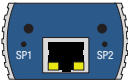

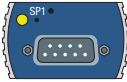
### APPLICATIONS

- Loadlock control
- Forevacuum pressure monitoring
- Safety circuits in vacuum systems
- General measurement and control in the medium and rough vacuum range
- Control of high vacuum ionization gauges

### ORDERING INFORMATION

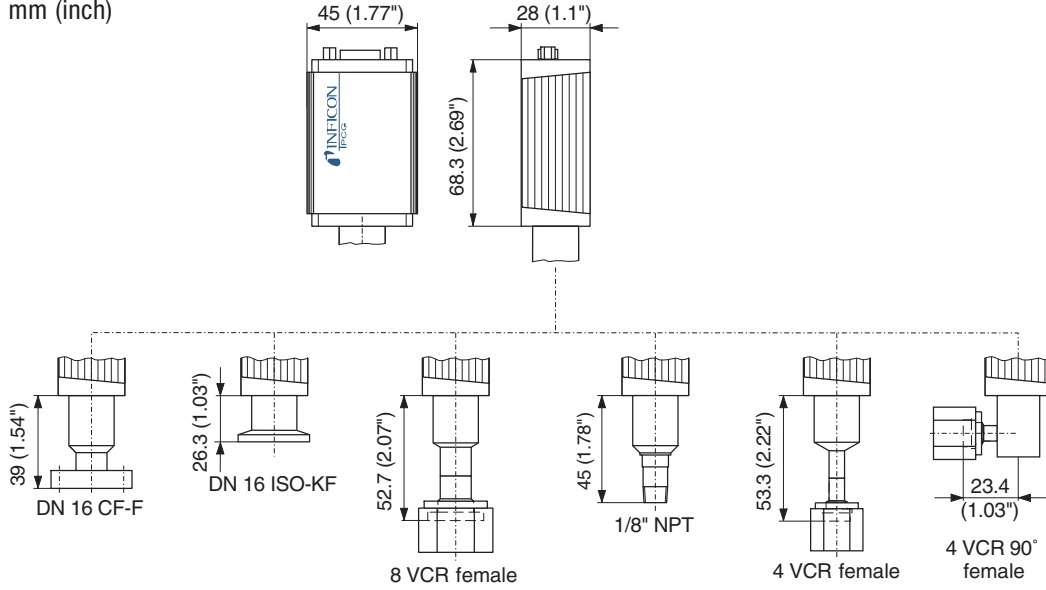
Type Setpoint Connector	PCG400 none FCC 68	PCG400-S with 2 setpoints FCC 68	PCG410 none 9 D-Sub	PCG410-S with 1 setpoint 9 D-Sub
DN 16 ISO-KF	355-000	355-010	355-020	355-030
1/8" NPT	355-001	355-011	355-021	355-031
DN 16 CF-F	355-002	355-012	355-022	355-032
8 VCR®, female	355-004	355-014	355-024	355-034
4 VCR®, female	355-005	355-015	355-025	355-035
4 VCR® 90°, female			355-026	

## SPECIFICATIONS

		<b>PCG400 FCC 68</b>	<b>PCG400-S FCC 68</b>	<b>PCG410 9 D-Sub</b>	<b>PCG410-S 9 D-Sub</b>
					
		for INFICON VGC40x vacuum gauge controllers		for direct connection to PC / PLC	
Electrical connection		FCC 68, 8 pin		D-Sup, 9 pin, male	
Measurement range	mbar Torr	5 x 10 <sup>-4</sup> to 1500 3.8 x 10 <sup>-4</sup> to 1125			
Accuracy (N <sub>2</sub> )		±15% ±5% ±2.5%			
	1 x 10 <sup>-3</sup> ... 50 mbar	±15%			
	50 ... 950 mbar	±5%			
	ATM (950 ... 1050 mbar)	±2.5%			
Repeatability (N <sub>2</sub> )		±2%			
	1 x 10 <sup>-3</sup> to 1100 mbar	±2%			
Mounting orientation		any			
Setpoint		none	2	none	1
Range (N <sub>2</sub> )	mbar		1.5 x 10 <sup>-3</sup> ... 1400		1.5 x 10 <sup>-3</sup> ... 1400
Relay contact			n.o. / potential free		n.o. / potential free
Hysteresis			10% of threshold		10% of threshold
Contact rating	V DC / A		30 / 1		30 / 1
Relay status			LED, green		LED, green
Pressure, max. (absolute)	bar	5			
Temperature		+10 ... +50 -20 ... +65 +80 <160			
Operation (ambient)	°C	+10 ... +50			
Storage	°C	-20 ... +65			
Bakeout at flange	°C	+80			
Filament	°C	<160			
Power supply		15 ... 30 (Ripple ≤ 1 V <sub>pp</sub> )			
Voltage	V DC	15 ... 30 (Ripple ≤ 1 V <sub>pp</sub> )			
Consumption, max.	W	2.5			
Output signal analog	V	0 ... +10.3		0 ... +9.0	
Measurement range, logarithmic	V	+1.9 ... +10.23		+2.2 ... +8.68	
Relation voltage / pressure	V / Decade	1.286		1	
Response time	ms	10		10	
Connector		FCC 68, female, 8 pin (shielded)			
Cable length, max.	m (ft)	100 (330)			
Materials exposed to vacuum		Al <sub>2</sub> O <sub>3</sub> (>99.5%), tungsten, stainless steel, Cu, glass, NiFe, Ni SnAg, AgPd			
Internal volume KF / CF	cm <sup>3</sup>	6 / 8			
Weight KF / CF	g	90 / 120			
Protection type		IP 40			

## DIMENSIONS

mm (inch)



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### GLOBAL HEADQUARTERS:

Two Technology Place, East Syracuse, NY 13057 USA  
 Tel: +1.315.434.1100 Fax: +1.315.437.3803 E-mail: reachus@inficon.com

UNITED STATES FRANCE GERMANY LIECHTENSTEIN SWITZERLAND UNITED KINGDOM CHINA JAPAN KOREA SINGAPORE TAIWAN

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